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A Strategic and Prioritized Approach to Evidence-Based Nursing Care in Emerging Infectious Diseases

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Currently, the nursing care paradigm in confronting Emerging Infectious Diseases (EIDs)—such as COVID-19, pandemic influenza, and other novel viruses—has shifted from purely experiential practice to precise science and clinical evidence. Under these circumstances, the nurse serves not merely as a caregiver but as the frontline in identifying, controlling, and managing such crises. Nursing interventions must be executed based on the latest guidelines from the World Health Organization (WHO) and national protocols [1], following a distinct hierarchy of priorities.

The primary objective entails infection control and the severance of transmission chains; consequently, bio-safety takes precedence over all therapeutic interventions. Scientific evidence demonstrates that failure in infection control precipitates the collapse of healthcare systems. To this end, the rigorous implementation of standard isolation measures, tailored to transmission routes (droplet, airborne, contact), is imperative [2]. This includes the selection of appropriate Personal Protective Equipment (PPE)—specifically respiratory protection for airborne infections and fluid-resistant gowns for patients presenting with diarrhea caused by emerging viruses. Furthermore, modern nursing leadership is critical in navigating these crises [3].

Subsequent measures focus on the management of patient "cohorting." This involves segregating suspected cases from confirmed ones, and symptomatic patients from asymptomatic carriers, to prevent nosocomial infections. Furthermore, education and strict supervision regarding hand hygiene and PPE usage are emphasized, particularly the direct monitoring of "donning" and "doffing" procedures by other healthcare personnel, given that the highest risk of contamination occurs during the exit process.

Secondary Priority: Rigorous clinical surveillance and the early identification of clinical deterioration are paramount. Given that the clinical trajectory of emerging diseases is often unknown, modern nursing emphasizes the utilization of standardized screening tools. Through the application of early warning scores, regular monitoring of vital signs (every 4–8 hours or more frequently as indicated), and continuous screening, nurses can anticipate septic shock or respiratory failure prior to the onset of catastrophic events. Subtle changes in blood pressure or respiration may signal the onset of acute respiratory distress syndrome (ARDS). Therefore, precise monitoring of pulmonary function and targeted oxygen therapy are essential. This involves the use of accurate pulse oximetry and SpO2 monitoring, alongside the implementation of "Awake Proning" strategies for severely ill patients requiring oxygen. Research indicates that the prone position in conscious patients receiving oxygen therapy reduces the necessity for mechanical ventilation [4]. Concurrently, monitoring for thromboembolism and coagulopathies—by assessing limb appearance, skin (petechiae), and Glasgow Coma Scale (GCS)—facilitates the early detection of blood clots, which are highly prevalent in novel viral infections.

Tertiary Priority: Protocol-based pharmacological management and the control of adverse effects are critical. As treatments for emerging diseases are often experimental or combination therapies, the nurse's role in medication safety is vital. This involves the precise administration of antiviral or corticosteroid therapies, ensuring strict adherence to timing, and monitoring for side effects such as hyperglycemia or hepatic and renal

dysfunction. Additionally, fluid management and detoxification are pursued to prevent fluid overload, which can lead to pulmonary edema, utilizing fluid balance scales and central monitoring for critically ill patients. In later stages, palliative care and the management of drug complications become the focus; should new treatments induce severe adverse effects, the nurse must be the first to identify symptoms and alert the specialist.

Quaternary Priority: Psychosocial and communicative support (stress and isolation management) is integrated into the care plan. Communicable infectious diseases are invariably accompanied by fear, social stigma, and isolation. Modern nursing regards mental health as equivalent to physical health. Interventions to mitigate isolation stress include facilitating patient-family communication via technology, providing calm and supportive status updates, and ensuring a tranquil environment within the isolation room. Furthermore, the management of psychiatric sequelae—such as sepsis-associated encephalopathy or drug-induced delirium—is implemented using ICU delirium assessment scales. The prevalence of mental health symptoms among healthcare workers and patients during such pandemics is significant, necessitating proactive psychological support [5]. Establishing a regular sleep-wake cycle by minimizing light and noise at night, alongside providing psychological support to families through regular, transparent reports (even telephonically) to alleviate their anxiety—which directly impacts the patient's mental health—is essential.

Quinary Priority: The issue of self-care and nurse resilience (Sustainability of Care) is addressed. It is axiomatic that an exhausted and impaired nurse cannot provide scientific care. Therefore, nurses must attend to self-care by managing energy and work schedules, adhering to ergonomic principles, and ensuring rest between shifts to prevent medical errors induced by fatigue. Monitoring staff health is also a crucial supportive measure; conducting regular screening tests and vaccinating healthcare personnel based on occupational safety principles significantly contributes to the nurse's capacity for self-care.

In summary, evidence-based nursing in emerging infectious diseases represents an integration of "clinical expertise," "current research," and "patient preferences." The prioritization of actions commences with environmental safety, progresses to precise physiological monitoring, and culminates in psychosocial support. Through this approach, the specialist nurse not only saves the patient's life but also breaks the chain of transmission within the community and preserves the healthcare system from collapse.

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